Appl. No. 09/842,387
Amdt. dated October 17, 2005
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AMENDMENTS TO THE SPECIFICATION

Please replace the last paragraph on page 8 of the application with the following

paragraph:

FIGS. 3A, 3B, and 3C illustrate one embodiment of the present invention where the

contents of the head are copied into the tail and the traveling direction of the data

structure is towards the beginning of the tree. FIG. 3A illustrates a sorted tree structure

containing a fixed four levels tree structure: level 0 contains the root, level 1 and 2

contain parent nodes, and level 3 contains leaf nodes. The traversing data structure is

shown below the tree with its head containing a leaf node index 80 and its tail containing

an empty leaf node. The data structure includes <u>a head representing a first pointer to a</u>

<u>first leaf node, a tail representing a second pointer to a second leaf node and</u> a body[[,]]

physically adjacent to the head and to the tail, having a set of pointers pointing to

contiguous empty nodes. Subsequently, in FIG. 3B, the data structure examines its head

and detects that the content is non-empty and thereafter copies the content of the leaf

node indexed 80 into the tail. When the node indexed 80 has been copied into the tail,

the appropriate ancestors of the new node indexed 80 must also be updated to an index of

80 in order to maintain the invariants of the sorted tree structure. In FIG. 3C, the

ancestors of the new node in the tail are shown updated from the node tree level to the

root tree level.

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